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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,218	12/03/2001	Minoru Imura	017446-0322	5072
22428	7590	10/17/2005	EXAMINER	
FOLEY AND LARDNER LLP			MOORE JR, MICHAEL J	
SUITE 500			ART UNIT	PAPER NUMBER
3000 K STREET NW				2666
WASHINGTON, DC 20007				

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/998,218	IMURA, MINORU	
	Examiner	Art Unit	
	Michael J. Moore, Jr.	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 December 2001.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-10 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 03 December 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 5/9/2002 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

Drawings

2. The drawings are objected to because of the following informalities: In Figure 6, the word "slop" should be "slot" in step S606.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 2, and 7 are rejected under 35 U.S.C. 102(a) as being anticipated by Naghian (WO 00/04649) provided in Applicant's submitted IDS. Naghian teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim 1, "extraction means for extracting a transmission power control signal from a reception signal containing a transmission power control signal" is anticipated by mobile station 1-2 (extraction means) of Figure 1 that receives power control commands (transmission power control signals) from base station 1-36 and assembles them into a vector 1-4 as spoken of on page 5, lines 5-10.

"Storage means for sequentially storing transmission power control signals output from the extraction means" is anticipated by control bit register 1-6 (storage means) of Figure 1 that stores the power control commands of vector 1-4 as spoken of on page 5, lines 8-10.

"First determination means for determining whether an instruction to increase/decrease transmission power based on a plurality of transmission power control signals stored in the storage means is repeatedly generated" is anticipated by DSP 1-8 and Processor 1-10 (first determination means) of Figure 1 that analyze the

command bit vector 1-4 and perform calculation and comparison spoken of on page 5, lines 10-11, as well as page 8, lines 10-15, which states that the mobile station goes through the power control command values in the change history to detect whether the power control command stream is even (repeatedly generated).

Lastly, “update stopping means for stopping transmission power updating operation if the determination result from the first determination means indicates that the transmission power is repeatedly increased/decreased” is anticipated by control transmission means 1-12 - 1-22 (update stopping means) of Figure 1 that adjusts and controls the mobile station power spoken of on page 5, lines 11-13, as well as page 8, lines 12-15, which states that if the power control command stream is even, the power level is not changed but is kept stable (step 3-20 of Figure 3B).

Regarding claim 2, “wherein the extraction means, storage means, first determination means, and update stopping means are arranged in a CDMA mobile terminal” is anticipated by the WCDMA mobile station 1-2 of Figure 1.

Regarding claim 7, “extracting a transmission power control signal from a reception signal containing a transmission power control signal” is anticipated by mobile station 1-2 of Figure 1 that receives power control commands (transmission power control signals) from base station 1-36 and assembles them into a vector 1-4 as spoken of on page 5, lines 5-10.

“Sequentially storing extracted transmission power control signals” is anticipated by control bit register 1-6 of Figure 1 that stores the power control commands of vector 1-4 as spoken of on page 5, lines 8-10.

“Determining whether an instruction to increase/decrease transmission power based on a plurality of stored transmission power control signals is repeatedly generated” is anticipated by page 8, lines 10-15, which states that the mobile station goes through the power control command values in the change history to detect whether the power control command stream is even (repeatedly generated).

Lastly, “stopping transmission power updating operation if the transmission power is repeatedly increased/decreased” is anticipated by page 8, lines 12-15, which states that if the power control command stream is even, the power level is not changed but is kept stable (step 3-20 of Figure 3B).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 3-5, 8, and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Naghian (WO 00/04649) in view of Tran et al. (WO 00/33479) provided in Applicant's submitted IDS.

Regarding claim 3, Naghian teaches the apparatus of claim 1. Naghian does not teach second determination means for determining whether frequency deviation of a reception wave due to the Doppler effect is not greater than a predetermined value, and upon this determination being true, stopping the updating of transmission power.

However, Tran et al. teaches in Figure 7 and on page 25, lines 7-33, how the Doppler shift (frequency deviation) of a received signal is estimated and used to derive the estimated velocity of mobile station 10 of Figure 4. This velocity is then compared to a predetermined threshold value in step 180 of Figure 7. Tran et al. follows that if the estimated velocity of mobile station 10 is smaller than the predetermined threshold value, then the power control is derived from the received signal rather than calculating a modified power control (step 210).

At the time of the invention, it would have been obvious to someone skilled in the art to combine the velocity estimation teachings of Tran et al. with the apparatus of Naghian in order to by-pass or modify the derivation of power control commands for improved link performance as spoken of on page 16, lines 29-34 of the Tran et al. reference.

Regarding claim 4, Naghian further teaches WCDMA mobile station 1-2 (extraction means) of Figure 1 containing control bit register 1-6 (storage means), DSP 1-8 and processor 1-10 (first determination means), and control transmission means 1-12 – 1-22 (update stopping means). Naghian does not teach second determination means as described above with respect to claim 3.

However, Tran et al. teaches a determination means as described above with respect to claim 3.

At the time of the invention, it would have been obvious to someone skilled in the art to combine the velocity estimation teachings of Tran et al. with the apparatus of Naghian in order to by-pass or modify the derivation of power control commands for

improved link performance as spoken of on page 16, lines 29-34 of the Tran et al. reference.

Regarding claim 5, Naghian teaches the apparatus of claim 1. Naghian does not teach Doppler effect measuring means for comparing a slot period of a reception signal with a reference slot period to measure a slot period deviation of a reception wave due to the Doppler effect, which is produced upon movement of the terminal.

However, Tran et al. teaches in Figure 7 and on page 25, lines 7-33, how the Doppler shift (slot period deviation) of a received signal is estimated and used to derive the estimated velocity of mobile station 10 of Figure 4. This velocity is then compared to a predetermined threshold value in step 180 of Figure 7. Tran et al. follows that if the estimated velocity of mobile station 10 is smaller than the predetermined threshold value, then the power control is derived from the received signal rather than calculating a modified power control (step 210).

At the time of the invention, it would have been obvious to someone skilled in the art to combine the velocity estimation teachings of Tran et al. with the apparatus of Naghian in order to by-pass or modify the derivation of power control commands for improved link performance as spoken of on page 16, lines 29-34 of the Tran et al. reference.

Regarding claim 8, Naghian teaches the method of claim 7. Naghian does not teach determining whether frequency deviation of a reception wave due to the Doppler effect is not greater than a predetermined value, and upon this determination being true, stopping the updating of transmission power.

However, Tran et al. teaches in Figure 7 and on page 25, lines 7-33, how the Doppler shift (frequency deviation) of a received signal is estimated and used to derive the estimated velocity of mobile station 10 of Figure 4. This velocity is then compared to a predetermined threshold value in step 180 of Figure 7. Tran et al. follows that if the estimated velocity of mobile station 10 is smaller than the predetermined threshold value, then the power control is derived from the received signal rather than calculating a modified power control (step 210).

At the time of the invention, it would have been obvious to someone skilled in the art to combine the velocity estimation teachings of Tran et al. with the method of Naghian in order to by-pass or modify the derivation of power control commands for improved link performance as spoken of on page 16, lines 29-34 of the Tran et al. reference.

Regarding claim 9, Naghian teaches the method of claim 7. Naghian does not teach comparing a slot period of a reception signal with a reference slot period to measure a slot period deviation of a reception wave due to the Doppler effect, which is produced upon movement of the terminal.

However, Tran et al. teaches in Figure 7 and on page 25, lines 7-33, how the Doppler shift (slot period deviation) of a received signal is estimated and used to derive the estimated velocity of mobile station 10 of Figure 4. This velocity is then compared to a predetermined threshold value in step 180 of Figure 7. Tran et al. follows that if the estimated velocity of mobile station 10 is smaller than the predetermined threshold

value, then the power control is derived from the received signal rather than calculating a modified power control (step 210).

At the time of the invention, it would have been obvious to someone skilled in the art to combine the velocity estimation teachings of Tran et al. with the apparatus of Naghian in order to by-pass or modify the derivation of power control commands for improved link performance as spoken of on page 16, lines 29-34 of the Tran et al. reference.

7. **Claims 6 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Naghian (WO 00/04649) in view of Takano (U.S. 5,924,043) provided in Applicant's submitted IDS.

Regarding claims **6 and 10**, Naghian teaches the apparatus of claim **1** as well as the method of claim **7**. Naghian does not teach determining whether a predetermined frequency component of frequency components obtained by Fourier-transforming a plurality of transmission power control signals is not more than a predetermined value, and upon this determination being true, stopping the update of transmission power.

However, Takano teaches in Figures 15-18 and on column 15, lines 1-24, how the frequency of serials of TPC bits are measured versus mobile unit speed and how this information is compared to a threshold value to determine a step size to be used for the update of transmission power.

At the time of the invention, it would have been obvious to someone skilled in the art to combine the TPC serial frequency measurement of Takano with the apparatus and method of Naghian in order to regulate the updating of transmission power.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shiraki et al. (U.S. 6,675,021) and Baker et al. (U.S. 6,556,838) are other references pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

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DANG TON
PRIMARY EXAMINER